



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/525,898	03/15/2000	Torgny Palenius	040070-922	9354

21839 7590 06/25/2004

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

LEE, CHI HO A

ART UNIT	PAPER NUMBER
----------	--------------

2663

DATE MAILED: 06/25/2004

20

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/525,898

Applicant(s)

PALENIUS, TORGNY

Examiner

Andrew Lee

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8, 12-14 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-8, 12-14, and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 2-7, 12-14, and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Umeda et al U.S. Patent Number 5,420,850.

Re Claim 2, fig. 1 teaches a base station transmitting a composite signal (See col. 4, lines 46-60) comprising of plurality of PN channels (a set of codes) to be received by the mobile receiver (*receiving a composite signal*) wherein the interference level detector 24B of the mobile estimates interference of the desired channel (*reserving at least one code interference....only*) wherein the desired channels are Control Channels associated with an PN spreading codes in the control channel measurement mode (*estimating said interference...said at least one reserved code*); in particular, with the mobile stored spreading codes [for level monitoring use] corresponding to the control channels of all cells in the service area, the mobile is able to select the control channel of a base station with the optimal level (See col. 5, lines 28-48 & col. 6, lines 23-42 & col. 9, lines 28-50).

Re Claims 3 and 14, refer to Claim 1, wherein the Control Channel carries control information and not traffic data (does not contain data spread).

Art Unit: 2663

Re Claims 3 and 14, refer to Claim 1, wherein the Control Channel carries control information and not traffic data (does not contain data spread).

Re Claim 4, the base station broadcasts a control channel that identifies the communication channels to the mobile (See col. 5, lines 20-28).

Re Claim 5, refer to Claim 2, fig. 1 teaches the mobile 20 comprising a receiver 21 and Correlation Detector 22 collectively for receiving and despreading the spreaded signals (at least one channelization code) from the base station; PN code generating part 23 (a reserved code) are read out under control by by Cont 25 (a processor) that is used by interference detector 24B for estimating interference (See col. 6, lines 26-41).

Re Claim 6, refer to Claims 4 and 5, wherein the control channel identifies control channel information (said reserved code) that is used by the Cont 25 in a control channel receiving level measuring mode. Furthermore, fig. 1 is implemented using CDMA air interface.

Re Claim 7, refer to Claim 4, wherein the control channel includes traffic channels CH1~CHm.

Re Claim 12, further teaches that the mobile stores (a memory) information about the control channels (said reserved code) of adjoining cells (See col. 9, lines 30-40).

Re Claim 13, refer to Claim 12.

Re Claims 17, 18, refer to Claims 2, 5, wherein the stored code in the mobile (at least one code) corresponds control channel of a particular base station servicing area/cell (a communication cell to which the receiver belongs)

Re Claim 19, 20, refer to Claim 2, 5, wherein the receiver of the mobile despreads the received composite signals using the stored PN codes of the control channel (despreading the composite signal), wherein the measured interference is only with the respect to the mobile station because the mobile is the only device measuring the interference.

Re Claim 21, refer to Claim 2, each the base stations in the servicing area are associated with PN coded control channel, and these PN codes are only used the CDMA system to despreading of the received signal. When the mobile station receives the composite signal, the mobile station estimate the interference level using the spread PN codes. The PN code associated with the control channel is only used for despreading the control channels, the mobile uses assigned PN code associated with the traffic channel to transmit or encode signals for transmission.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umeda et al U.S. Patent Number 5,420,850 in view of Kato et al U.S. Patent Number 5,583,851.

Re Claim 8, Umeda et al teaches how the mobile compares the respective spreading codes between cells to determine the one cell in which the mobile station is currently located based on the spreading code corresponding to the comparison signal

having the highest level of signal quality. Afterworth, communication between the mobile and radio-communication system can be made by the mobile.

Umeda et al fails to explicitly teaches "said code associated with said traffic channel is selected based upon a desired user bit rate for a connection ..".

Kato et al teaches a mobile unit which can transmit information at a high-bit rate by allocating a plurality of channel numbers to a user who requires a high-bit rate communication (See col. 4, lines 20-46 & col. 5, lines 23-46). The control channel in Umeda et al provide information regarding the traffic channels that are used to transmit information to respective mobile stations from the base station. This would suggest that information regarding idle channels is available to the mobile station. As disclosed by Kato et al, plurality of channels/codes are allocated to user based on the required/desired high-bit rate. One skilled in the art would have been motivated by Kato et al to select traffic channels based on the desired user bit rate to improve throughput.

Therefore, it would have been obvious to one ordinary skilled to incorporate the teaching of Kato et al into the teaching of Umeda et al.

Response to Arguments

5. Applicant's arguments filed 6/15/04 have been fully considered but they are not persuasive.

Re Claims 2, 4-7, and 12-13, Applicant argues that Umeda fails to disclose or suggest " a receiver estimates interference using at least one reserved code that is not used for transmitting signals".

However Examiner respectfully disagree.

It is unclear which claim the applicant is referring to, but Claim 2 or 5 do not require such limitation.

Newly submitted Claim 21 requires that "the reserved at least one code...not to encode signals for transmission". The mobile transmit signals using assign traffic PN code and not the "reserved PN code" for the control channels.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 703-305-1500. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AI
6/23/04

ANDY LEE
PATENT EXAMINER